

## Powdery Mildew (*Oidium spp.*)

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As the name implies, powdery mildew, (asexual stage *Oidium spp.*), has the appearance of white powder on leaf surfaces. It can occur on many species of plants, such as beans, cereal crops, crucifers, cucurbits, grapes, mango, roses, various trees and weeds. Many different species of fungi cause the disease. Powdery mildew on cucurbits is caused by two different fungi, (sexual stages *Erysiphe cichoracearum* and *Sphaerotheca fuliginea*). Both infect only cucurbits, in general, with few exceptions. *Erysiphe polygoni* causes powdery mildew on beans. A different strain of *E. polygoni* causes powdery mildew on crucifers.

The disease affects the surface of older leaves and can affect young, developing tissue, such as flower buds in some plants. The fungus grows on the surface of plants producing millions of spores that are carried by the wind. These spores need dew to germinate. After germination spores penetrate the leaf tissue causing infection. Rain-fall washes the spores off the leaves so the disease is less severe in the dry season.

After leaves are infected they dry up and fall off. Loss of production results from this defoliation coupled with death of young flowering parts.

### Control:


- Bury or incorporate crop residues that are a source of fungal spores.
- Do not stagger plantings of the same crop at close distances because older plants may harbor spores that could infect younger plants.
- Time of planting may allow you to grow your crop when powdery mildew is less of a problem.
- Resistant cultivars or varieties are available, such as: Poinsett, Poinsett 76, and Marketmore (for cucumbers); Perlita and Tam-Uvalde (for cantaloupe), and Tamdew (for honeydew). Some of the KW beans are reported as resistant; however, fungal strains may vary from place to place. Contender beans are reported as being tolerant.
- Certain fungicides can control powdery mildew.
- Mineral oil (1%) with baking soda (0.5%) effectively controls the disease in cucurbits.



Leaf affected with powdery mildew

If the use of chemicals is required or if additional information is desired, consult an Extension Agent at your local land grant institution. In Guam, you may also consult the Guam Fruit and Vegetable Pesticide Guide for current recommendations and permissible uses.

### For Further Information:

 American Samoa Community College (684) 699-1575 - fax (684) 699-5011  
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College of Micronesia (FSM) (691) 320-2480 - fax (691) 320-2479  
College of the Marshall Islands (692) 625-3236 - fax (692) 625-4699  
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